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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,713	12/21/2001	Michel Buard	13864	6794

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EXAMINER

SMITH, JULIE KNECHT

ART UNIT

PAPER NUMBER

3682

DATE MAILED: 09/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/024,713

Applicant(s)

BUARD ET AL.

Examiner

Julie K Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 12-19 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Regarding claims 1 and 15, the phrase "generally" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "generally"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 8, 12 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Hurrell, II (5,491,893).

Regarding claims 1, 8, 12 and 15, Hurrell, II discloses a ball bearing cage in the form of an annular ring obtained by machining or casting metal or composite, having first and second oppositely oriented sides (see fig. 1b) defining offset recesses for receiving balls (24) in one row

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and intended to be interposed between an inner ring (12) and an outer ring (16) of a bearing (see fig. 6a), wherein said recesses are distributed in two groups, each recess of the first group having an opening for positioning a ball located on a first side of said cage, while each recess of the second group has an opening for positioning a ball located on a second side of said cage, opposite the first side.

Regarding claim 2, Hurrell, II discloses each recess being defined between two arms (28) and a bottom (30), said arms extending, when said cage is in configuration mounted in a bearing, in a direction substantially parallel to an axis of rotation of the bearing, while said bottom is substantially perpendicular to said axis.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hurrell, II as applied to claims 1-2, 8, 12 and 15 above, and further in view of Ducrue (EP 288334).

Regarding claims 3 and 4, Hurrell, II discloses a bearing cage, as claimed, but does not disclose the configuration of the recesses, as claimed. However, Ducrue discloses certain of said arms define two adjacent recesses belonging to the same group of recesses, said arms each comprising a first end adjacent the respective bottoms of said adjacent recesses and a second free end. Ducrue further discloses certain of said arms defining two adjacent recesses belonging to

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the two groups of recesses, said arms comprising a first end adjacent the bottom of one of said two adjacent recesses and a second end adjacent the bottom of the other adjacent recesses.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the recess arrangement of Hurrell, II with the teachings of Ducrue, so as to reduce the complexity of the bearing assembly process.

Regarding claim 6, Ducrue discloses said arms forming two concave surfaces (8a,b) oriented towards two adjacent recesses and adapted to cooperate with the outer surface of said balls (see fig. 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide concave surfaces on the arms of the bearing cage of Hurrell, II so as to more securely retain the ball bearings within the cage.

8. Claim 5, 12-14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hurrell, II as applied to claims 1-2, 8, 12 and 15 above, and further in view of Claesson (3,586,405). Hurrell, II discloses a bearing cage as claimed, but lacks an orifice at the bottom of the recess. However, Claesson teaches a group of recesses, wherein the bottom is pierced with an orifice (12c).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cage of Hurrell, II with the teachings of Claesson to provide an orifice at the bottom of the recess so that the recess can be accessed without disassembling the bearing.

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9. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hurrell, II as applied to claims 1-2, 8, 12 and 15 above, and further in view of Albrecht et al. (5,768,060).

Regarding claim 16, Hurrell, II discloses a bearing cage, as claimed, but lacks a notch, as claimed. However, Albrecht et al. teaches a bearing ring (see fig. 2a) provided with a notch (230) for introduction of balls in an internal volume defined between races formed respectively on said inner and outer rings.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cage of Hurrell, II with the teachings of Albrecht et al. to provide a notch on a ring so as to provide means for assembly and replacement of balls.

Regarding claim 17, Hurrell, II discloses said first recesses spaced apart in an offset relationship with respect to said second recesses.

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hurrell, II in view of Albrecht et al. as applied to claims 16 and 17 above, and further in view of Claesson. Hurrell, II discloses a bearing cage as claimed, but lacks an orifice at the bottom of the recess. However, Claesson teaches a group of recesses, wherein the bottom is pierced with an orifice (12c).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cage of Hurrell, II with the teachings of Claesson to provide an orifice at the bottom of the recess so that the recess can be accessed without disassembling the bearing.

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Allowable Subject Matter

11. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

12. Applicant's arguments, see amendment, filed 6/12/03, with respect to the rejection(s) of claim(s) 1-9 under Ducrué have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hurrell, II.

Conclusion


13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie K Smith whose telephone number is 703-305-3948. The examiner can normally be reached on Monday-Friday, 8-5:30, (Every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on 703-308-3668. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

JKS
jks

September 4, 2003


MARCUS CHARLES
PRIMARY EXAMINER
9/4/03